

**Notes on the Biology of *Therion circumflexum* (L.),  
with a Description of the Immature Stages**  
(Hymenoptera: Ichneumonidae)

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Wasps of the genus *Therion* are internal parasitoids of Lepidoptera larvae. A female wasp injects one or more eggs into the body cavity of a caterpillar, and the parasitoid larva, upon hatching from the egg, begins to feed on the non-vital tissues of its host. The parasitoid larva undergoes three larval molts. When its host pupates, the larval parasitoid kills the host and pupates within the host's pupal shell. The biology of larvae and adults of *T. morio* (Fabr.) has been described by Tothill (1922). The purpose of this present paper is to describe the egg, larval stages, and pupa of *T. circumflexum* (L.). Behavior of *T. morio* and *T. circumflexum* adults has been described elsewhere (Slobodchikoff, 1973).

MATERIALS AND METHODS

Six *T. circumflexum* females were captured on 22 April 1969 at Alpine Lake, Marin County, California. Each female was immediately introduced into a round cardboard container 10 cm in diameter and 7 cm deep, which was covered with a plastic top. Three containers each had 5 third instar larvae of *Spodoptera exigua* (Hbn.), the other three each had 5 third instar larvae of *Pseudaletia unipuncta* (Haw.). Host larvae were obtained from the insect pathology Lepidoptera cultures maintained by the Division of Entomology and Parasitology, University of California, Berkeley. Female wasps were kept in the containers for two days, then removed and kept in larger plastic cages (see Slobodchikoff, 1973, for a description of the cages). All containers were kept together at an average temperature of 22°C and an average relative humidity of 45 percent. A total of 9 *Spodoptera* and 11 *Pseudaletia* larvae or pupae were dissected. One *Spodoptera* larva was dissected immediately after the adult wasps were transferred to plastic cages. Six *Therion* eggs were found. On 28 April, 1969, five days after initial contact with a parasitoid wasp, 3 larvae of both *Spodoptera* and *Pseudaletia* were dissected. Two *Spodoptera* larvae lacked *Therion* larvae, while the third contained 4 first instar *Therion* larvae. Two *Pseudaletia* larvae were not parasitized, while one con-